⚠ WARNING : ⚠

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

NOTICE

FEDERAL EMISSION COMPONENT DEFECT WARRANTY and CALIFORNIA EMISSION CONTROL WARRANTY are applicable to only those engines/ generators complied with EPA (Environmental Protection Agency) and CARB (California Air Resources Board) emission regulations in the U.S.A.

NOTICE

To the engines/generators exported to and used in the countries other than the U.S.A., warranty service shall be performed by the distributor in each country in accordance with the standard Makita engine/generator warranty policy as applicable.

AIR INDEX

To show compliance with California emission regulations, a hangtag has been provided displaying the Air Index level and durability period of this engine.

The Air Index level defines how clean an engine's exhaust is over a period of time. A bar graph scaled from "0" (most clean) to "10" (least clean) is used to show an engine's Air Index level. A lower Air Index level represents cleaner exhaust from an engine.

The period of time (in hours) that the Air Index level is measured is known as the durability period. Depending on the size of the engine, a selection of time periods can be used to measure the Air Index level (see below).

Descriptive Term		Applicable to Emissions Durability Period
Moderate	-	50 hours (engine from 0 to 65 cc) 125 hours (engine greater than 65 cc)
Intermediate	-	125 hours (engine from 0 to 65 cc) 250 hours (engine greater than 65 cc)
Extended	-	300 hours (engine from 0 to 65 cc) 500 hours (engine greater than 65 cc)

Notice : This hangtag must remain on this engine or piece of equipment, and only be removed by the ultimate purchaser before operation.

FEDERAL EMISSIONS COMPONENT DEFECT WARRANTY

EMISSIONS COMPONENT DEFECT WARRANTY COVERAGE – This emission warranty is applicable in all States, except the State of California.

Makita U.S.A. Inc., La Mirada, California, (herein "MAKITA") warrant(s) to the initial retail purchaser and each subsequent owner, that this Nonroad engine (herein "engine") has been designed, built, and equipped to conform at the time of initial sale to all applicable regulations of the U.S. Environmental Protection Agency (EPA), and that the engine is free of defects in materials and workmanship which would cause this engine to fail to conform with EPA regulations during its warranty period.

For the components listed under PARTS COVERED, the Makita Factory Service Center or Service Center authorized by MAKITA will, at no cost to you, make the necessary diagnosis, repair, or replacement necessary to ensure that the engine complies with applicable U.S. EPA regulations.

EMISSISON COMPONENT DEFECT WARRANTY PERIOD

The warranty period for this engine begins on the date of sale to the initial purchaser and continues for a period of 2 years.

US

PARTS COVERED

Listed below are the parts covered by the Emission Components Defect Warranty. Some of the parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part.

(1) Fuel Metering System
  (i) Carburetor and internal parts (and/or pressure regulator or fuel injection system).
  (ii) Air/fuel ratio feedback and control system, if applicable.
  (iii) Cold start enrichment system, if applicable.
  (iv) Regulator assy (gaseous fuel, if applicable)
(2) Air Induction System
  (i) Intake manifold, if applicable
  (ii) Air filter.
(3) Ignition System
  (i) Spark plugs.
  (ii) Magneto or electronic ignition system.
  (iii) Spark advance/retard system, if applicable.
(4) Exhaust manifold, if applicable
(5) Miscellaneous Items Used in Above Systems
  (i) Electronic controls, if applicable
  (ii) Hoses, belts, connectors, and assemblies.
  (iii) Filter lock assy (gaseous fuel, if applicable)

OBTAINING WARRANTY SERVICE

To obtain warranty service, take your engine to the nearest Makita Factory Service Center or Service Center authorized by MAKITA . Bring your sales receipts indicating date of purchase for this engine. The Makita Factory Service Center or Service Center authorized by MAKITA will perform the necessary repairs or adjustments within a reasonable amount of time and furnish you with a copy of the repair order. All parts and accessories replaced under this warranty become the property of MAKITA.

WHAT IS NOT COVERED

*Conditions resulting from tampering, misuse, improper adjustment (unless they were made by the Makita Factory Service Center or Service Center authorized by MAKITA during a warranty repair), alteration, accident, failure to use the recommended fuel and oil, or not performing required maintenance services.

*The replacement parts used for required maintenance services.

*Consequential damages such as loss of time, inconvenience, loss of use of the engine or equipment, etc.

*Diagnosis and inspection charges that do not result in warranty-eligible service being performed.

*Any non-authorized replacement part, or malfunction of authorized parts due to use of non-authorized parts.

OWNER'S WARRANTY RESPONSIBILITIES

As the engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. MAKITA recommends that you retain all receipts covering maintenance on your engine, but MAKITA cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the engine owner, you should however be aware that MAKITA may deny warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your engine to the nearest Makita Factory Service Center or Service Center authorized by MAKITA when a problem exists.

If you have any questions regarding your warranty rights and responsibilities, you should contact the Makita Warranty Department at 1-800-4-MAKITA for the information.

THINGS YOU SHOULD KNOW ABOUT THE EMISSION CONTROL SYSTEM WARRANTY MAINTENANCE AND REPAIRS

You are responsible for the proper maintenance of the engine. You should keep all receipts and maintenance records covering the performance of regular maintenance in the event questions arise. These receipts and maintenance records should be transferred to each subsequent owner of the engine. MAKITA reserves the right to deny warranty coverage if the engine has not been properly maintained. Warranty claims will not be denied, however, solely because of the lack of required maintenance or failure to keep maintenance records.

MAINTENANCE, REPLACEMENT OR REPAIR OF EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY REPAIR ESTABLISHMENT OR INDIVIDUAL;
HOWEVER, WARRANTY REPAIRS MUST BE PERFORMED BY THE MAKITA FACTORY SERVICE CENTER OR SERVICE CENTER AUTHORIZED BY MAKITA . THE USE OF PARTS THAT ARE NOT EQUIVALENT IN PERFORMANCE AND DURABILITY TO AUTHORIZED PARTS MAY IMPAIR THE EFFECTIVENESS OF THE EMISSION CONTROL SYSTEM AND MAY HAVE A BEARING ON THE OUTCOME OF A WARRANTY CLAIM.

If other than the parts authorized by MAKITA are used for maintenance replacements or for the repair of components affecting emission control, you should assure yourself that such parts are warranted by their manufacturer to be equivalent to the parts authorized by MAKITA in their performance and durability.

HOW TO MAKE A CLAIM

All repair qualifying under this limited warranty must be performed by a Makita Factory Service Center or Service Center authorized by MAKITA . In the event that any emission-related part is found to be defective during the warranty period, you shall notify Makita Warranty Department at 1-800-4-MAKITA and you will be advised of the appropriate warranty service dealer or service providers where the warranty repair can be performed. A list of the Factory Service Center locations and phone numbers is provided below for your convenience.

ARIZONA
3707 E.Broadway Rd., Ste.6
Phoenix, AZ 85040
(602) 437-2850

CALIFORNIA
41850 Christy St.
Fremont, CA 94538-5107
(510)657-9881

14930 Northam St.
La Mirada, CA 90638-5753
(714)522-8088

1970 Fulton Ave.
Sacramento, CA 95825
(916)482-5197

7674 Clairemont Mesa Blvd.
San Diego, CA 92111
(858)278-4471

16735 Saticoy St.,Ste. 105
Van Nuys, CA 91406
(818)782-2440

COLORADO
11839 E.51st Ave.
Denver, CO 80239-2709
(303) 371-2850

FLORIDA
750 East Sample Rd.
Pompano Beach, FL 33064
(954)781-6333

GEORGIA
4680 River Green Parkway NW
Duluth, GA 30096
(770) 476-8911

ILLINOIS
1450 Feehanville Dr.
Mt. Prospect, IL 60056-6011
(847) 297-3100

MARYLAND
7397 Washington Boulevard ,
Suite 104
Elkridge, MD 21075
(410) 796-4401

MASSACHUSETTS
232 Providence Highway
Westwood, MA 02090
(781) 461-9754

MINNESOTA
6427 Penn Ave. South
Richfield, MN 55423
(612) 869-5199

MISSOURI
9876 Watson Rd.
St.Louis, MO 63126-2221
(314) 909-9889

NEBRASKA
4129 S. 84th St.
Omaha, NE 68127
(402) 597-2925

NEVADA
3375 S. Decatur Blvd., Suites22-24
Las Vegas, NV 89102
(702) 368-4277

NEW JERSEY
251 Herrod Blvd.
Dayton, NJ 08810-1539
(609) 655-1212

NEW YORK
4917 Genessee St.
Cheektowaga, NY 14225
(716) 685-9503

OREGON
828 19th Ave., N. W.
Portland, OR 97209
(503) 222-1823

PENNSYLVANIA
1904 Babcock Blvd.
Pittsburgh, PA 15209
(412)822-7370

PUERTO RICO
200 Guayama St.
Hato Rey, PR 00917
(787) 250-8776

TENNESSEE
1120 Elm Hill Pike Suite 170
Nashville, TN 37210
(615)248-3321

TEXAS
12801 Stemmons Fwy Ste. 809
Farmers Branch, TX 75234
(972) 243-1150

12701 Directors Dr.
Stafford, TX 77477-3701
(281) 565-8665

3453 IH-35 North, Ste. 101
San Antonio, TX 78219
(210) 228-0676

WISCONSIN
Lincoln Plaza Shopping Ctr.
2245 S. 108th St.
West Allis, WI 53227
(414) 541-4776

CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT
(This warranty does not apply in any other state.)
YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and Makita U.S.A., Inc. (herein “MAKITA”) are pleased to explain the emission control warranty on your 2003 and later small off-road engine (herein “engine”). In California, new engine must be designed, built and equipped to meet the State's stringent anti-smog standards. MAKITA must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system includes parts such as the carburetor or fuel injection systems, the ignition system and the catalytic converter. Also included are the hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, MAKITA will repair your engine at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:

The 2003 and later engines are warranted for two years. If any emission-related part on your engine is defective, the part will be repaired or replaced by MAKITA.

OWNER'S WARRANTY RESPONSIBILITIES:

US

-As the engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. MAKITA recommends that you retain all receipts covering maintenance on your engine, but MAKITA cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

-As the engine owner, you should be aware, however, that MAKITA may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

-You are responsible for presenting your engine to a MAKITA service center as a problem exists. The warranty repairs should be completed in a reasonable time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact a Makita Factory Service Center Manager nearest you. A list of the Factory Service Center locations and phone numbers is provided below for your convenience.

LIMITED WARRANTY
– California Only –

MAKITA , a distributor of small off-road equipment in the U.S., warrants to the owner of 2003and later engines that the engine has been designed, built, and equipped at the time of manufacture so as to conform with the applicable regulations of the California Air Resources Board and, (2) is free from defects in materials and workmanship which may cause it to fail to conform with those regulations as applicable according to the terms and conditions stated below.

WARRANTY PERIOD

This warranty period begins on the date which the engine is delivered to the original retail purchaser and ends two years after that date. During this two year period MAKITA warrants to the original retail purchaser and each subsequent purchaser that the engine is free from defect in material and workmanship that can cause the failure of a warranted emission-related part.

WHAT IS COVERED UNDER THIS WARRANTY

Repair and/or replacement of any warranted emission-related part will be performed at no charge provided the work is performed at an authorized warranty station. There will also be no charge for any diagnostic labor performed at an authorized warranty station which leads to the determination that a warranted emission-related part is defective.

Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for the warranty period. Any warranted part which is scheduled for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement of that part. This warranty shall apply only towards the repair, replacement, and/or adjustment of the component parts listed below.

EMISSION-RELATED PARTS COVERED UNDER THIS WARRANTY

(1) Fuel Metering System

(i) Carburetor and internal parts (and/or pressure regulator or fuel injection system).

(ii) Air/fuel ratio feedback and control system, if applicable.

(iii) Cold start enrichment system, if applicable.

(iv) Regulator assy (gaseous fuel, if applicable)

(2) Air Induction System

(i) Intake manifold, if applicable

(ii) Air filter.

(3) Ignition System

(i) Spark plugs.

(ii) Magneto or electronic ignition system.

(iii) Spark advance/retard system, if applicable.

(4) Exhaust manifold, if applicable

(5) Miscellaneous Items Used in Above Systems

(i) Electronic controls, if applicable

(ii) Hoses, belts, connectors, and assemblies.

(iii) Filter lock assy (gaseous fuel, if applicable)

If it is determined by an authorized warranty station that other engine components have been damaged due to the failure of a warranted emission-related part during the warranty period, MAKITA will repair and/or replace the necessary components.

WHAT IS NOT COVERED UNDER THIS WARRANTY

This warranty does not cover any emission-related part which malfunctions, fails, or is damaged due to alterations and/or modifications such as changing, adding, or removing parts.

When an engine is being serviced under warranty, MAKITA and any of its authorized dealers, distributors, or warranty stations shall not be liable for any loss of use of the engine, for any damage to goods, or loss of time or inconvenience. This limited warranty also does not apply to any emission-related part which malfunctions, fails, or is damaged due to failure to follow the maintenance and operating instructions specified in the 2003 and later Owner's Manual including.

(a) Improper maintenance of any warranted emission-related part.

(b) Improper installation, adjustment, or repair of the engine or any warranted emission-related part unless performed by a factory authorized warranty station.

(c) Failure to use recommended fuel as specified in the 2003 and later Owner's Manual.

(d) Repairs and diagnosis performed outside of an authorized warranty station.

(e) Use of parts which are not authorized by MAKITA.

MAINTENANCE SCHEDULE

The engine owner is responsible for having all scheduled inspection and maintenance services performed at the intervals specified in the 2003 and later Owner's Manual and to retain records of these services as having been performed. These records should be transferred to each subsequent owner of the engine. MAKITA cannot deny a claim solely because there are no records of scheduled maintenance, however, a warranty claim may be denied if the failure to perform the scheduled maintenance and inspection resulted in the failure of a warranted emission-related part.
As a minimum, the engine owner is responsible for the scheduled inspection and maintenance described below which are based on the procedures described in the Owner's Manual.

PROCEDURE	INTERVAL
1) Change engine oil	: Initial 20 hours and every 100 hours afterward
2) Clean air cleaner (element)	: Every 50 hours
3) Replace air cleaner element	: Every 200 hours
4) Clean and adjust spark plug and electrodes	: Every 200 hours

Note: More frequent maintenance may be necessary under dusty, dirty or severe conditions.

REPAIR AND REPLACEMENT OF EMISSION-RELATED PARTS

It is recommended that only engine replacement parts which have been authorized and approved by MAKITA should be used in the performance of any warranty maintenance or repairs of emission-related parts. These replacement parts will be provided at no charge if the part is still under warranty.

HOW TO FILE A WARRANTY CLAIM AND WHERE TO GET WARRANTY SERVICES

Contact the nearest Makita Factory Service Center Manager to determine the appropriate location where the required warranty services are to be performed. A list of the Factory Service Center locations and phone numbers are provided below for your convenience.

41850 Christy St.
Fremont, CA 94538-5107
(510)657-9881

14930 Northam St.
La Mirada, CA 90638-5753
(714)522-8088

1970 Fulton Ave.
Sacramento, CA 95825
(916)482-5197

7674 Clairemont Mesa Blvd.
San Diego, CA 92111
(858)278-4471

16735 Saticoy St.,Ste. 105
Van Nuys, CA 91406
(818)782-2440

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FOREWORD

Thank you very much for purchasing a **MAKITA GENERATOR**.
This manual covers operation and maintenance of the **MAKITA GENERATOR**.

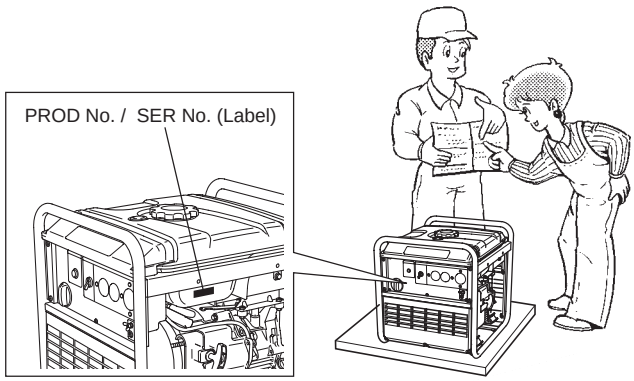
Please take a moment to familiarize yourself with the proper operation and maintenance procedures in order to maximize the safe and efficient use of this product.
Keep this owner's manual at hand, so that you can refer to it at any time.
Due to constant efforts to improve our products, certain procedures and specifications are subject to change without notice.

When ordering spare parts, always give us the **MODEL, PRODUCTION NUMBER (PROD No.)** and **SERIAL NUMBER (SER No.)** of your Product.

US

Please fill in the following blanks after checking the production number on your product.
(Location of label is different depending on the product model.)

PROD NO.	SER NO.



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NOTE **Please refer to the illustrations on the back page of the front cover or back cover for Fig. 1 to 6 indicated in the sentence.**

1. SAFETY PRECAUTIONS

Please make sure you review each precaution carefully.

Pay special attention to statement preceded by the following words.

⚠WARNING **“WARNING” indicates a strong possibility of severe personal injury or loss of life if instructions are not followed.**

⚠CAUTION **“CAUTION” indicates a possibility of personal injury or equipment damage if instructions are not followed.**

⚠WARNING

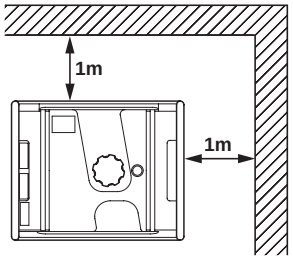
US

Do not operate the generator near gasoline or gaseous fuel because of the potential danger of explosion or fire.
Do not fill the fuel tank with fuel while the engine is running. Do not smoke or use open flame near the fuel tank. Be careful not to spill fuel during refueling. If fuel is spilt, wipe it off and let dry before starting the engine.

⚠WARNING

Do not place in flammables near the generator.
Be careful not to place fuel, matches, gunpowder, oily cloths, straw, trash, or any other in flammables near the generator.

⚠WARNING



Do not operate the generator inside a room, cave, tunnel, or other insufficiently ventilated area. Always operate it in a well-ventilated area, otherwise the engine may become overheated, and the poisonous carbon monoxide gas contained in the exhaust gases will endanger human lives. Keep the generator at least 1 meter (3 feet) away from any structure or building during use.

If the generator must be used indoors, the area must be well-ventilated and extreme caution must be taken regarding the discharge of exhaust gases.

⚠WARNING

Do not enclose the generator nor cover it with a box.
The generator has a built-in forced air cooling system, and may become overheated if it is enclosed.
If generator has been covered to protect it from the weather during non use, be sure to remove it and keep it well away from the area during generator use.

⚠WARNING

Operate the generator on a level surface.
It is not necessary to prepare a special foundation for the generator.
However, the generator will vibrate on an irregular surface, so choose a level place without surface irregularities.
If the generator is tilted or moved during operation, fuel may spill and / or the generator may tip over, causing a hazardous situation.
Proper lubrication cannot be expected if the generator is operated on a steep incline or slope. In such a case, piston seizure may occur even if the oil is above the upper level.

⚠WARNING

Pay attention to the wiring or extension cords from the generator to the connected device.
If the wire is under the generator or in contact with a vibrating part, it may break and possibly cause a fire, generator burnout, or electric shock hazard.
Replace damaged or worn cords immediately.

⚠WARNING

Do not operate in rain, in wet or damp conditions, or with wet hands.
The operator may suffer severe electric shock if the generator is wet due to rain or snow.

⚠WARNING

If wet, wipe and dry it well before starting. Do not pour water directly over the generator, nor wash it with water.

⚠WARNING

Be extremely careful that all necessary electrical grounding procedures are followed during each and every use. Failure to do so can be fatal.

⚠WARNING

Do not contact the generator to a commercial power line. Connection to a commercial power line may short circuit the generator and ruin it or cause electric shock hazard. Use the transfer switch for connecting to domestic circuit.

⚠WARNING

No smoking while handling the battery. The battery emits flammable hydrogen gas, which can explode if exposed to electric arcing or open flame.
Keep the area well-ventilated and keep open flames/sparks away when handling the battery.

⚠WARNING

Engine becomes extremely hot during and for some time after operation. Keep combustible materials well away from generator area.
Be very careful not to touch any parts of the hot engine especially the muffler area or serious burns may result.

⚠WARNING

Keep children and all bystanders at a safe distance from work areas.

⚠WARNING

It is absolutely essential that you know the safe and proper use of the power tool or appliance that you intend to use. All operators must read, understand and follow the tool/appliance owners manual. Tool and appliance applications and limitations must be understood. Follow all directions given on labels and warnings. Keep all instruction manuals and literature in a safe place for future reference.

⚠WARNING

Use only "LISTED" extension cords.
When a tool or appliance is used outdoors, use only extension cords marked "For Outdoor Use". Extension cords, when not in use should be stored in a dry and well ventilated area.

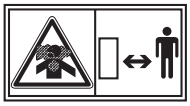
⚠WARNING

Always switch off generator's no fuse breaker and disconnect tools or appliances when not in use, before servicing, adjusting, or installing accessories and attachments.

Symbols and Meanings

In accordance with the European requirements (eec Directives),the specified symbols as shown in the following table are used for the products and this instruction manual.

US

	Read the operator's instruction manual.		*Fire, open light and smoking prohibited.*
	Stay clear of the hot surface.		*Caution, risk of electric shock.*
	*Exhaust gas is poisonous.* *Do not operate in an unventilated room.*		*Do not connect the generator to the commercial power lines.*
	Stop the engine before refueling.		

	ON *(power and Engine)*		*IN-position of a bistable push control*		*Engine start (Electric start)*
	OFF *(power and Engine)*		*Protective earth (ground)*		*Engine stop*
	Alternating current		*Fuse*		*Diesel fuel*
	Direct current		*Engine oil*		*Fast*
	Plus ; *positive polarity*		*Add oil*		*Slow*
	Minus ; *negative polarity*		*Battery charging condition*		
	OUT-position of a bistable push control		*Choke ;* *cold starting aid*		

P r	*Rated power (kW)*	***COP***	*Continuous power*	***COS*** Φ r	*Rated power factor*
f r	*Rated frequency (Hz)*	***U*** r	*Rated voltage (V)*	***I*** r	*Rated current (A)*
H max	*Maximum site altitude above sea-level (m)*	***T*** max	*Maximum ambient temperature (℃)*	m	*Mass (kg)*

2. COMPONENTS (See Fig. 1)

NOTE

Please refer to the illustrations on the back page of the front cover or back cover for Fig. 1 to 6 indicated in the sentence.

❶ CONTROL PANEL
❷ FRAME
❸ FUEL GAUGE
❹ FUEL TANK
❺ RECOIL STARTER (HANDLE)
❻ EXHAUST OUTLET
❼ TANK CAP
❽ FUEL STRAINER
❾ AIR CLEANER
❿ SPARK PLUG CAP
⓫ OIL DRAIN PLUG
⓬ OIL GAUGE (OIL FILLER)

3. PRE-OPERATION CHECKS (See Fig. 2)

1. CHECK ENGINE OIL (See Fig. 2-①,②)

Before checking or refilling oil, be sure generator is located on stable and level surface with engine stopped.

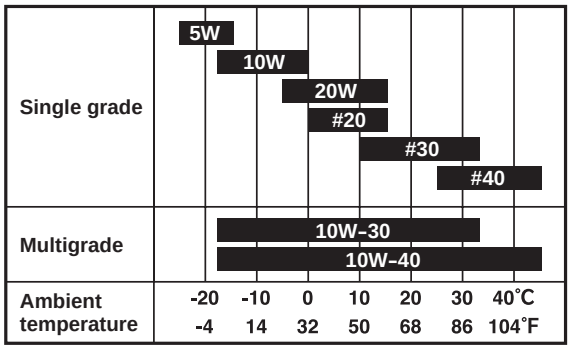
- Remove oil filler cap and check the engine oil level.(See Fig. 2-①)
  ❶ OIL GAUGE ❷ OIL FILLER
  ❸ UPPER LEVEL ❹ LOWER LEVEL
- If oil level is below the lower level line, refill with suitable oil (see table) to upper level line. Do not screw in the oil filler cap when checking oil level.(See Fig. 2-②)
  ❶ UPPER LEVEL ❷ LOWER LEVEL
- Change oil if contaminated. (See "How-To" Maintenance.)

Oil capacity :

Model	Upper level
G2800L	0.6 liters
G3200L	0.6 liters
G4300L	1.0 liters

Recommended engine oil:

Use 4-stroke automotive detergent oil of API service class SE or higher grade (SG, SH or SJ is recommended). SAE 10W-30 or 10W-40 is recommended for general, all-temperature use. If single viscosity oil is used, select the appropriate viscosity for the average temperature in your area.



2. CHECK ENGINE FUEL (See Fig. 2-③,④)

US

⚠WARNING

Do not refuel while smoking or near open flame or other such potential fire hazards. Otherwise fire accident may occur.

- Check fuel level at fuel level gauge.(See Fig. 2-④)
  ❶ EMPTY (E) ❷ FULL (F)
- If fuel level is low, refill with unleaded automotive gasoline.
- Be sure to use the fuel filter screen on the fuel filter neck.(See Fig. 2-③)
  ❶ FUEL FILTER SCREEN
  ❷ TANK CAP

Fuel tank capacity :

G2800L . . . . . 10.8 liters
G3200L . . . . . 10.8 liters
G4300L . . . . . 12.8 liters

⚠WARNING

Make sure you review each warning in order to prevent fire hazard.

- **Do not refill tank while engine is running or hot.**
- **Close fuel cock before refueling with fuel.**
- **Be careful not to admit dust, dirt, water or other foreign objects Into fuel.**
- **Wipe off spilt fuel thoroughly before starting engine.**
- **Keep open flames away.**

3. CHECKING COMPONENT PARTS

Check following items before starting engine:

- Fuel leakage from fuel hose, etc.
- Bolts and nuts for looseness.
- Components for damage or breakage.
- Generator not resting on or against any adjacent wiring.

4. CHECK GENERATOR SURROUNDINGS.

⚠WARNING

Make sure you review each warning in order to prevent fire hazard.

- **Keep area clear of in flammables or other hazardous materials.**
- **Keep generator at least 3 feet (1 meter) away from buildings or other structures.**
- **Only operate generator in a dry, well ventilated area.**
- **Keep exhaust pipe clear of foreign objects.**
- **Keep generator away from open flame. No smoking!**
- **Keep generator on a stable and level surface.**
- **Do not block generator air vents with paper or other material.**

US

5. GROUNDING THE GENERATOR

■ To ground the generator to the earth, connect the grounding lug of the generator to the grounding spike driven into the earth or to the conductor which has been already grounded to the earth. (See Fig. 2-⑤)

❶ GROUNDING SPIKE

■ If such grounding conductor or grounding electrode is unavailable, connect the grounding lug of the generator to the grounding terminal of the using electric tool or appliance. (See Fig. 2-⑥)

❶ GROUND TERMINAL

4. OPERATING PROCEDURES (See Fig. 3,4)

1. STARTING THE GENERATOR

⚠CAUTION

Check the oil level before each operations as outlined on page 5.

(a) Make sure the appliance is disconnected.

(b)Turn engine switch to " " (CHOKE) position. (When engine is warm or temperature is high, start engine with the switch at " " (RUN) position.) (See Fig. 3-①)

❶ " " (STOP) ❷ " " (CHOKE)

⚠CAUTION

- **Do not connect defective appliances including lines and plugs.**
- **Be sure appliances are not connected to generator when starting up. Starting the generator with an appliance connected could result in damage to the generator and/or appliance and in personal injury.**

(c) Pull the starter handle slowly until passing the compression point (resistance will be felt), then return the handle to its original position and pull briskly. (See Fig. 3-②)

❶ RECOIL STARTER HANDLE
❷ PULL BRISKLY

(d)After starting, allow the starter handle to return to its original position with the handle still in your hand.

NOTE

When engine fails to start after several attempts, repeat the starting procedures mentioned above with the engine switch placed at " " (RUN) position.

(e) After 20 to 30 seconds of warm-up is completed, turn the engine switch to " " (RUN) position. (See Fig. 3-③)

❶ " " (CHOKE) ❷ " " (RUN)

(f) Make sure the pilot lamp is on.
This indicates that the generator is properly operating.

NOTE

- **If the pilot lamp is off, Set the AC breaker to "ON" position.**
- **If no generating condition is found out, please consult nearest Makita factory or authorized service center.**

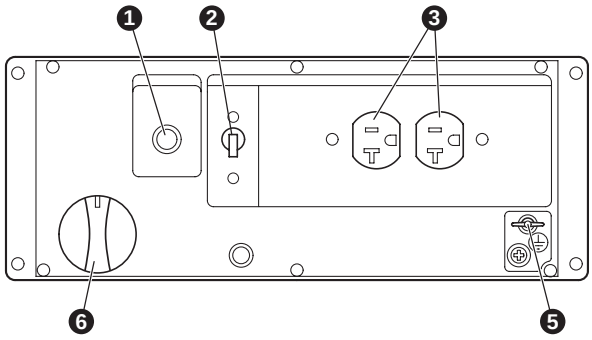
2. USING ELECTRIC POWER

⚠WARNING

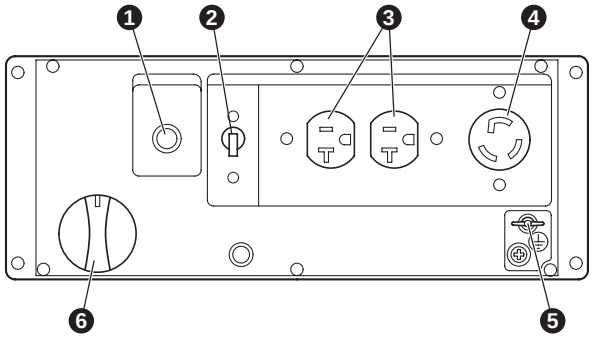
- **Make sure that the appliance is switched OFF before connecting it to the generator.**
- **Do not move the generator while it is running.**
- **Be sure to ground the generator if the connected appliance is grounded. Failure to ground unit may lead to electrical shock.**

(1) CONTROL PANEL

G2800L / G3200L



G4300L



CONTROL PANEL

❶ PILOT LAMP
❷ AC CIRCUIT BREAKER
❸ AC RECEPTACLES (20A)
❹ AC RECEPTACLES (30A)
❺ GROUND TERMINAL
❻ ENGINE SWITCH

(2) AC APPLICATION (See Fig. 4-①,②)

(a) Make sure the pilot lamp is turned on.

(b) Turn off the switch(es) of the electrical appliance(s) before connecting to the generator.

(c) Insert the plug(s) of the electrical appliance(s) into the receptacle. (See Fig. 4-①)

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■ Check the amperage of the receptacles used referring to **TABLE 1**, and be sure not to take a current exceeding the specified amperage.

■ Be sure that the total wattage of all appliances dose not exceed the rated output of the generator.

Style	Ampere	Receptacle	AC plug	Description
	Up to 20A	NEMA 5-20R	NEMA 5-20R	GFCI (Ground Fault Circuit Interrupter) Receptacle, duplex
	Up to 30A	NEMA 5-30R	NEMA 5-30R	Locking Receptacle

TABLE 1

⚠WARNING

■ **To take power out from the TWIST LOCK RECEPTACLE, insert the plug into the receptacle, and turn it clockwise to the lock position. (See Fig. 4-②)**

■ **Be sure to ground the generator if the connected electrical device is grounded.**

NOTE

When the no fuse breaker turns off during operation, the generator is over loaded or the appliance is defective.

Stop the generator immediately, check the appliance and / or generator for overloading, and have repaired as necessary by Makita factory or authorized service center.

(d) Turn on the switch of the appliance.

3. STOPPING THE GENERATOR

(a) Turn off the power switch of the electric equipment and unplug the cord from receptacle of the generator.

(b) Allow the engine about 3 minutes to cool down at no load before stopping.

(c) Turn the engine switch to the position " " (STOP). (See Fig. 4-③)

❶ " " (RUN) ❷ " " (STOP)

4. OIL SENSOR (See Fig. 4-④)

❶ OIL SENSOR

(a) The oil sensor detects the fall in oil level in the crankcase and automatically stops the engine when the oil level falls below a predetermined level.

(b) When engine has stopped automatically, switch off generator's no fuse breaker, and check the oil level. Refill engine oil to the upper level as instructed on page 5 and restart the engine.

(c) If the engine does not start by usual starting procedures, check the oil level.

⚠CAUTION

Do not remove OIL SENSOR PROBE when refilling with oil. Remove oil filler cap on the opposite side of carburetor.

5. WATTAGE INFORMATION

Some appliances need a "surge" of energy when starting.
This means that the amount of electrical power needed to start the appliance may exceed the amount needed to maintain its use.
Electrical appliances and tools normally come with a label indicating voltage, cycles / Hz, amperage (amps) and electrical power needed to run the appliance or tool.
Check with your nearest dealer or service center with questions regarding power surge of certain appliances or power tools.

- Electrical loads such as incandescent lamps and hot plates require the same wattage to start as is needed to maintain use.
- Loads such as fluorescent lamps require 1.2 to 2 times the indicated wattage during start-up.
- Loads for mercury lamps require 2 to 3 times the indicated wattage during start-up.
- Electrical motors require a large starting current. Power requirements depend on the type of motor and its use. Once enough "surge" is attained to start the motor, the appliance will require only 50% to 30% of the wattage to continue running.
- Most electrical tools require 1.2 to 3 times their wattage for running under load during use. For example, a 5000 watt generator can power a 1800 to 4000 watt electrical tool.
- Loads such as submersible pumps and air compressors require a very large force to start. They need 3 to 5 times the normal running wattage in order to start.
  For example, a 5000 watt generator would only be able to drive a 1000 to 1700 watt pump.

NOTE
The following wattage chart is general guide only. Refer to your specific appliance for correct wattage.

To determine the total wattage required to run a particular electrical appliance or tool, multiply the voltage figure of the appliance/tool by the amperage (amps) figure of same. The voltage and amperage (amps) information can be found on a name plate which is normally attached to electrical appliances and tools.

Applications	Applicable Wattage (W)		
	G2800L	G3200L	G4300L
	60Hz		
Incandescent lamp, Heater	approx. 2400	approx. 2700	approx. 3700
Fluorescent lamp, Electric tool	approx. 1200	approx. 1400	approx. 1900
Mercury lamp	approx. 800	approx. 1000	approx. 1600
Pump, Compressor	approx. 500	approx. 550	approx. 800

VOLTAGE DROP IN ELECTRIC EXTENSION CORDS

When a long electric extension cord is used to connect an appliance or tool to the generator, a certain amount of voltage drop or loss occurs in the extension cord which reduces the effective voltage available for the appliance or tool.
The chart below has been prepared to illustrate the approximate voltage loss when an extension cord of 300 feet (approx. 100 meters) is used to connect an appliance or tool to the generator.

Nominal cross section	A.W.G. Gauge No.	Allowable current	No.of strands / strands dia.	Resistance	Current Amp.							Voltage drop
mm^2	No.	A	No./mm	Ω/100m	1A	3A	5A	8A	10A	12A	15A	
0.75	18	7	30/0.18	2.477	2.5V	8V	12.5V	—	—	—	—	
1.27	16	12	50/0.16	1.486	1.5V	5V	7.5V	12V	15V	18V	—	
2.0	14	17	37/0.26	0.952	1V	3V	5V	8V	10V	12V	15V	
3.5	12 to 10	23	45/0.32	0.517	—	1.5V	2.5V	4V	5V	6.5V	7.5V	
5.5	10 to 8	35	70/0.32	0.332	—	1V	2V	2.5V	3.5V	4V	5V	

6. SPARK ARRESTER

In a dry or wooded area, it is recommendable to use the prodoct with a spark arrester. Some areas require the use of a spark arrester. Please check your local laws and regulations before operating your prodoct.

The spark arrester must be cleaned regularly to keep it functioning as designed.
A clogged spark arrester :

- Prevents the flow of exhaust gas
- Reduces engine output
- Increases fuel consumption
- Makes starting difficult

If the engine has been running, the muffler and the spark arrester will be very hot. Allow the muffler to cool before cleaning the spark arrester.

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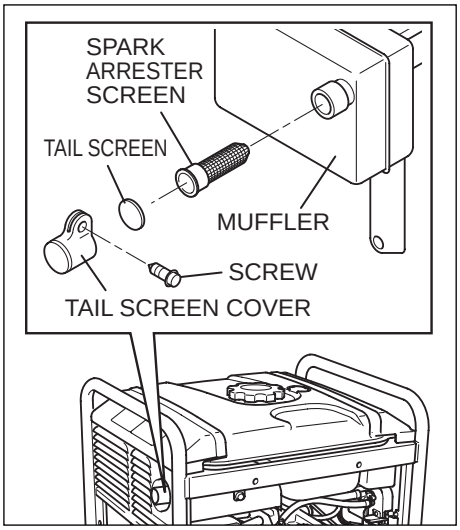
How to remove the spark arrester

1. Remove the flange bolts from the muffler cover and remove the muffler cover.
2. Remove the special screw from the spark arrester and remove the spark arrester from the muffler.

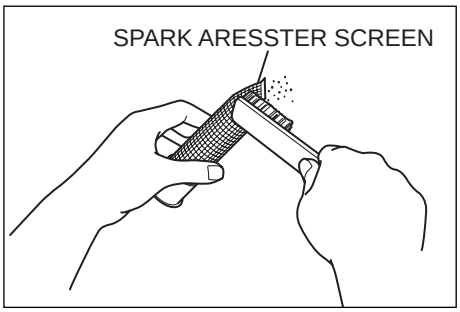


Clean the spark arrester screen

Use a brush to remove carbon deposits from the spark arrester screen.
Be careful to avoid damaging the screen.

The spark arrester must be free of breaks and holes.
Replace the spark arrester if it is damaged.

Install the spark arrester, and muffler protector in the reverse order of disassembly.

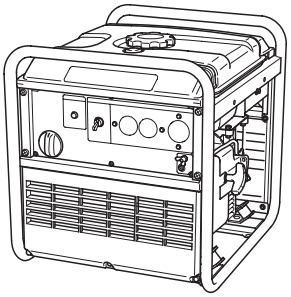


7. MAINTENANCE SCHEDULE

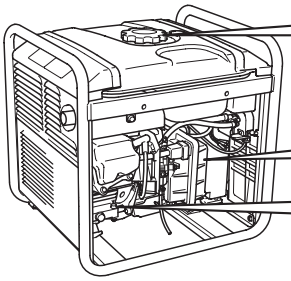
MAINTENANCE, REPLACEMENT OR REPAIR OF THE EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY NON-ROAD ENGINE REPAIR ESTABLISHMENT OR INDIVIDUAL.

DAILY INSPECTION

Before running the generator, check the following service items:



- Safe surroundings
- Leakage of gasoline and engine oil
- Enough clean engine oil
- AC terminals for damage



- Enough gasoline
- Excessive vibration,noise
- Clean air cleaner element
- Loose or broken bolts and nuts

PERIODIC MAINTENANCE

Periodic maintenance is vital to safe and efficient operation of your generator.
Check the table below for periodic maintenance intervals.
IT IS ALSO NECESSARY FOR THE USER OF THIS GENERATOR TO CONDUCT THE MAINTENANCE AND ADJUSTMENTS ON THE EMISSION-RELATED PARTS LISTED BELOW TO KEEP THE EMISSION CONTROL SYSTEM EFFECTIVE.

The emission control system consists of the following parts :

(1) Carburetor and internal parts
(2) Cold start enrichment system, if applicable
(3) Intake manifold, if applicable
(4) Air cleaner elements
(5) Spark plug
(6) Magneto or electronic ignition system
(7) Spark advance/retard system, if applicable
(8) Exhaust manifold, if applicable
(9) Hoses, belts, connectors, and assemblies

The maintenance schedule indicated in the table is based on the normal generator operation. Should the generator be operated in extremely dusty condition or in heavier loading condition, the maintenance intervals must be shortened depending on the contamination of oil, clogging of filter elements, wear of parts, and so on.

Periodic Maintenance Schedule table

Maintenance Items	Every 8 hours (Daily)	Every 20 hours	Every 50 hours (Weekly)	Every 200 hours (Monthly)	Every 500 hours	Every 1000 hours
CLEAN GENERATOR AND CHECK BOLT AND NUTS	● (Daily)					
CHECK AND REFILL ENGINE OIL	● (Refill daily up to upper level)					
CHANGE ENGINE OIL (*Note1)		● (Initial)	● (Every 100 hours)			
CLEAN SPARK PLUG			●			
CLEAN AIR CLEANER			●			
REPLACE AIR CLEANER ELEMENT			●			
CLEAN FUEL FILTER				●		
CLEAN AND ADJUST SPARK PLUG AND ELECTRODES				●		
REPLACE SPARK PLUG					●	
SPARK ARRESTER			● (Every 100 hours)			
REMOVE CARBON FROM CYLINDER HEAD (*Note 2)					●	
CHECK AND ADJUST VALVE CLEARANCE (*Note 2)					●	
CLEAN AND ADJUST CARBURETOR (*Note 2)					●	
CLEAN AND REPLACE CARBON BRUSHES					●	
REPLACE FUEL LINES						● (Yearly)
OVERHAUL ENGINE (*Note 2)						●
AC REXEPTACLES	● (Daily)					
PILOT LAMP	● (Daily)					
ROTOR						●
STATOR						●
REPLACE ENGINE MOUNT						●

*Note: 1. Initial oil change should be performed after first twenty (20) hours of operation. Thereafter change oil every hundred (100) hours.
Before changing oil, check for a suitable way to dispose of old oil.
Do not pour it down into sewage drains, onto garden soil or into open streams. Your local zoning or environmental regulations will give you more detailed instructions on proper disposal.

*Note: 2. As to the procedures for these items, please refer to the SERVICE MANUAL or consult your nearest Makita service dealer.

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8. "HOW-TO" MAINTENANCE (See Fig. 5)

1. ENGINE OIL CHANGE (See Fig. 5-①)

■ Change engine oil every 50 hours.
(For new engine, change oil after 20 hours.)

(a) Drain oil by removing the drain plug and the oil filler cap while the engine is warm.

❶ OIL DRAIN PLUG

(b) Reinstall the drain plug and fill the engine with oil until it reaches the upper level on the oil filler cap.

■ Use fresh and high quality lubricating oil to the specified level as directed on page 5.
If contaminated or deteriorated oil is used or the quantity of the engine oil is not sufficient, the engine damage will result and its life will be greatly shortened.

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2. SERVICING THE AIR CLEANER (See Fig. 5-②)

Maintaining an air cleaner in proper condition is very important.
Dirt induced through improperly installed, improperly serviced or inadequate elements damages and wears out engines. Keep the element always clean.

(a) Unhook the cover and remove the cleaner element.

❶ ❷ ELEMENT (Urethane form)

(b) Urethane form : Wash the element with fresh water. Squeeze out the water then dry the element. (Do not twist.)

3. CLEANING AND ADJUSTING SPARK PLUG (See Fig. 5-③,④)

(a) If the plug is contaminated with carbon, remove it using a plug cleaner or wire brush.

(b) Adjust the electrode gap to 0.6 to 0.7 mm (0.024 to 0.028 in.).

❶ SPARK PLUG
❷ PLUG WRENCH
❸ SPARK PLUG CAP

Model	Spark plug
G2800L	NGK BR-6HS (CHAMPION RL86C)
G3200L	
G4300L	

4. CLEANING FUEL STRAINER (See Fig. 5-⑤)

Dirt and water in the fuel are removed by the fuel strainer.

❶ FUEL STRAINER CUP

(a) Remove the strainer cup and throw away water and dirt.

(b) Clean the screen and strainer cup with gasoline.

(c) Tightly fasten the cup to main body, making sure to avoid fuel leak.

5. CHECKING CARBON BRUSH (See Fig. 5-⑥)

If the brush become excessively worn, its contact pressure with the slip ring changes and causes a roughened surface on the slip ring, resulting in irregular generator performance.

Check the brush every 500 hours or if generator performance is irregular.

If the brush is 5 mm (0.2 in.) long or less, replace it with a new one.

❶ BRUSH HOLDER
❷ BRUSH
❸ 5 mm
❹ M5 BOLT : 1 pc.
❺ BRUSH COVER

(a) Remove the brush cover.

(b) Disconnect the wire connector and remove the brush.

(c) Carefully note the brush direction and relative position with the slip ring when installing new brush.

9. PREPARATION FOR STORAGE (See Fig. 6)

The following procedures should be followed prior to storage of your generator for periods of 6 months or longer.

- Drain fuel from fuel tank carefully by disconnecting the fuel line.
  Gasoline left in the fuel tank will eventually deteriorate making engine-starting difficult.
- Remove the drain screw of the carburetor.(See Fig. 6-❶)
  ❶ DRAIN SCREW
- Change engine oil.
- Check for loose bolts and screws, tighten them if necessary.
- Clean generator thoroughly with oiled cloth. Spray with preservative if available. NEVER USE WATER TO CLEAN GENERATOR !
- Pull starter handle until resistance is felt, leaving handle in that position.
- Store generator in a well ventilated, low humidity area.

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10. TROUBLESHOOTING

When generator engine fails to start after several attempts, or if no electricity is available at the output socket, check the following chart. If your generator still fails to start or generate electricity, contact your nearest Makita factory or authorized service center for further information or corrective procedures.

When Engine Fails to Start:

Check if engine switch is in its proper position.	⟷	Turn engine switch to "N"(CHOKE) position.
Check fuel level.		If empty, refill fuel tank making sure not to overfill.
Check to make sure generator is not connected to an appliance.		If connected, turn off the power switch on the connected appliance and unplug.
Check spark plug for loose spark plug cap.		If loose, push spark plug cap back into place.
Check spark plug for contamination.	⟷	Remove spark plug and clean electrode.
Check engine oil level.		If the engine oil level is low, add the oil to the upper level line on the oil gauge.

When No Electricity Is Generated at Receptacle :

Check if the breaker is not activated with the overload lamp turned on. Check if the DC circuit breaker is turned off.	⟷	Depress the circuit breaker into ON position, after making sure the electric power level is proper and the electric appliance(s) are in the normal condition.
Check AC terminals for loose connection.		Secure connection if necessary.
Check to see if engine starting was attempted with appliances already connected to generator.	⟷	Turn off switch on the appliance, and disconnect cable from receptacle. Reconnect after generator has been started properly.
Low power.		Carbon brushes are excessively worn

11. SPECIFICATIONS

MODEL			G2800L	G3200L	G4300L
Alternator	Type		AVR		
	Frequency	Hz	60		
	Rated voltage	V	120		
	Maximum output	kVA	2.8	3.2	4.3
	Rated output	kVA	2.4	2.7	3.7
	Rated power factor		1.0		
	Over current protector		No fuse Breaker		
Engine	Model		EX17	EX21	EX27
	Type		Forced air-cooled, 4-cycle, OHC Gasoline Engine		
	Displacement	mL	169	212	265
	Fuel		Automotive Unleaded Gasoline		
	Fuel tank capacity	L(U.S. gal)	10.8 (2.9)		12.8 (3.9)
	Rated continuous operation [Approx.]	hours	7.5	6.7	6.4
	Starting system		Recoil		
Dimension	Length	mm(in.)	537 (21.1)		580 (22.8)
	Width	mm(in.)	432 (17.0)		477 (18.8)
	High	mm(in.)	475 (18.7)		508 (20.0)
Dry weight		kg(lb)	43 (94.8)	48 (105.8)	55 (121.3)
Valve Clearance (Intake & Exhaust)		mm(in.)	0.1±0.03 (0.0039±0.0012) Note : Adjust the valve clearance while the engine is cold.		
Emissions Durability Period (California only)			500 hours		

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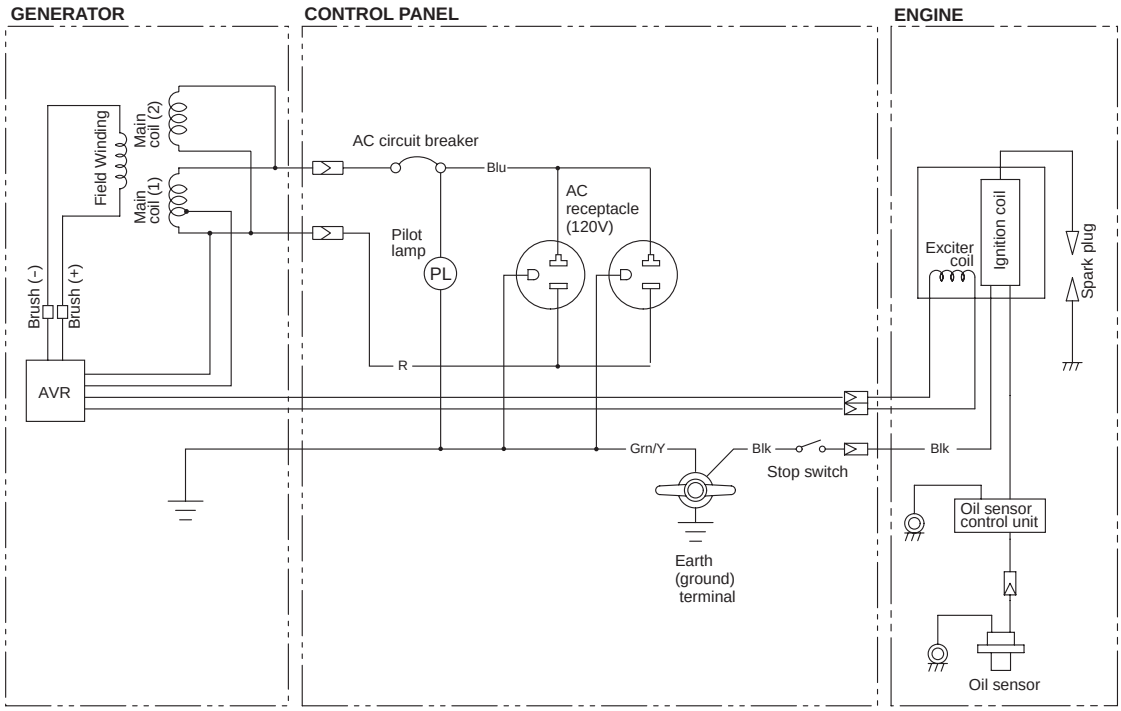
12.WIRING DIAGRAM

G2800L / G3200L (60Hz-120V)



Wiring color cord

Blk	: Black	LBlu	: Light blue	Grn	: Green	Gry	: Gray	Y	: Yellow	Pur	: Purple
Blk/W	: Black/White	Brn	: Brown	Grn/W	: Green/White	R	: Red	W/Blk	: White/Black		
Blu	: Blue	Brn/W	: Brown/White	Org	: Orange	W	: White	Grn/Y	: Green/Yellow		

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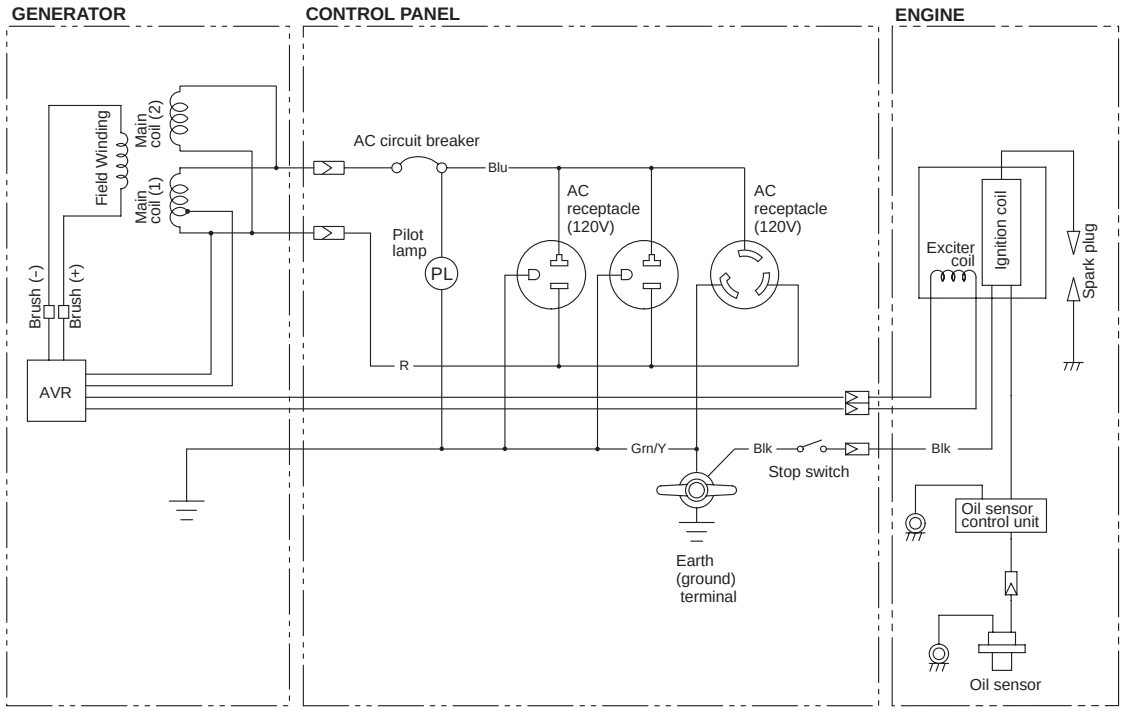
US

G4300L (60Hz-120V)



Wiring color cord

Blk	: Black	LBlu	: Light blue	Grn	: Green	Gry	: Gray	Y	: Yellow	Pur	: Purple
Blk/W	: Black/White	Brn	: Brown	Grn/W	: Green/White	R	: Red	W/Blk	: White/Black		
Blu	: Blue	Brn/W	: Brown/White	Org	: Orange	W	: White	Grn/Y	: Green/Yellow		